SCHEDULE

	Wednesday, December 2	**Thursday, December 3**
8.50 – 9.00	**Opening**	
9.00 – 9.40	D. Hartmann	L. Bonilla
9.40 – 10.20	V. Mehrmann	M. Sanarico
10.20 – 11.00	P. Lünnemann	J. Korell/P. Wolny
11.00 – 11.20	**Coffee Break**	**Coffee Break**
11.20 – 12.00	A. Strahilov	M. Arnold
12.00 – 12.40	B. Simeon	L. Burger/V. Dörlich
12.40 – 13.30	**Lunch Break**	**Lunch Break**
13.30 – 14.10	A. Carpio	D. Jakovetic
14.10 – 14.35	J. Weissen	P.M. Simioni
14.35 – 15.00	U. Morelli	M. Ebeling-Rump
15.00 – 15.25	M. Zeegers	M. Vaamonde-Rivas
15.25 – 15.50	A.J. Ionescu	D. Sommer
15.50 – 16.10	**Coffee Break**	**Coffee Break**
16.10 – 16.50	R. Bueno Zabalo	F. Edelvik
16.50 – 17.30	L. Formaggia	**Closing**
17.30 – 17.55	M. Vynnycky	

ECMI Webinar ``Math for Industry 4.0 – Models, Methods and Big Data"
December 2 – 3, 2020

Presentations ECMI Webinar, December 2-3, 2020

invited talks

Martin Arnold (Martin Luther University Halle-Wittenberg, Halle (Saale)):
Modular modelling, modular simulation, modular time integration

Luis Bonilla (Universidad Carlos III de Madrid, Leganes):
Topological data analysis in industry and biomedicine

Rikardo Bueno Zabalo (Basque Research & Technology Alliance (BRTA), Mendaro):
The Manufuture Strategic Research and Innovation Agenda 2030

Lilli Burger/**Vanessa Dörlich** (Fraunhofer Institute for Industrial Mathematics ITWM, Kaiserslautern):
Data based modeling and identification of effective stiffness parameters of cable bundles

Ana Carpio (Universidad Complutense de Madrid):
Optimization approach to digital holography

Fredrik Edelvik (Fraunhofer-Chalmers Centre for Industrial Mathematics, Gothenburg):
Virtual paint shop – Simulation of oven curing

Luca Formaggia (Politecnico di Milano):
Some examples of collaboration with industry by the MOX Laboratory of Politecnico di Milano

Dusan Jakovetic (University of Novi Sad):
Optimization and machine learning for Industry 4.0: Some challenges, use cases, and lessons learned

Dirk Hartmann (Siemens AG, Munich):
Mass Customization and Industry 4.0 – Mathematical challenges for real-time manufacturing process simulation

Jens Korell/**Patricia Wolny** (Project Management Agency Karlsruhe (PTKA)):
Manufacturing in HORIZON EUROPE

Pascal Lünnemann (Fraunhofer Institute for Production Systems and Design Technology, Berlin):
The application of digital twins: The current state of industry

Volker Mehrmann (TU Berlin):
Hierarchical energy based modeling for digital twins

Maurizio Sanarico (SDG Group, Milan):
Math & Data Science in action: Some real cases

Bernd Simeon (TU Kaiserslautern):
Towards digital twins in rotating machinery

Anton Strahilov (EKS InTec GmbH, Weingarten):
From virtual plant to digital shadow – practical experience

contributed talks

Moritz Ebeling-Rump (Weierstrass Institute (WIAS), Berlin):
Topology optimization under local volume constraints for improved buckling behavior

Adela Janeta Ionescu (University of Craiova):
Statistical design of experiments: Choosing the computational way in approaching big models

Umberto Morelli (Instituto Tecnológico de Matemática Industrial, Santiago de Compostela):
Real-time estimation of boundary condition in steel continuous casting molds

Paolo Mario Simioni (Moxoff S.p.A., Milan):
Reduced order modelling of a packaging system

David Sommer (Weierstrass Institute (WIAS), Berlin):
A dynamic programming approach for robust receding horizon control in continuous systems

Manuel Vaamonde-Rivas (Instituto Tecnológico de Matemática Industrial (ITMATI), Santiago de Compostela):
Statistical models for predictive maintenance: PreCoM project

Michael Vynnycky (University of Limerick):
Modelling for the continuous casting of steel

Jennifer Weissen (University of Mannheim):
Optimization of manufacturing systems using digital twins

Mathé Zeegers (Centrum Wiskunde & Informatica (CWI), Amsterdam):
Task-driven learned hyperspectral data reduction using end-to-end supervised deep learning